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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/726,852	11/30/2000	Robert A. Cochran	10007240-1	1945

7590

06/07/2004

HEWLETT-PACKARD COMPANY

Intellectual Property Administration

P.O. Box 272400

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EXAMINER

POLTORAK, PIOTR

ART UNIT

PAPER NUMBER

2134

DATE MAILED: 06/07/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

**Office Action Summary**

Application No.

09/726,852

Applicant(s)

COCHRAN ET AL.

Examiner

Peter Poltorak

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 November 2000.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-10 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. Claims 1-10 have been examined.

***Priority***

2. No claim for priority has been made in this application.
3. The effective filing date for the subject matter defined in the pending claims in this application is 11/30/2000.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1- 2 and 4, 6-7 and 9 are rejected under 35 U.S.C. 103(a) as obvious over Tulloch  
*(Mitch Tulloch, "Administering Internet Information Server 4", New York McGraw-Hill Professional, 1998, ISBN: 0072128232).*
5. Re claim 1: Tulloch teaches a method for authorizing access by remote entities (*client*) to logical units (*files and folders*) provided by a mass storage device (*volume*) (*Tulloch pg. 81*) comprising:  
  
providing an access table that includes entries that each represents authorization of a particular remote entity to access a particular logical unit (*Tulloch pg. 152*); and  
  
when a remote entity requests execution of an operation directed to a specified control device logical unit and involving one or more additional specified logical

units, authorizing the request for execution of the operation only when an entry exists in the access table that represents authorization of the remote entity to access the specified control device logical unit and, for each of the one or more additional specified logical units (*Tulloch pg. 133*).

Although Tulloch teaches entries that each represents a particular control device logical unit (*virtual server*) to access a particular logical unit (*Tulloch pg. 177-179 and Figure 5-13 pg. 182*), Tulloch does not explicitly teach providing a supplemental access table that includes entries that each represents authorization of a particular control device logical unit to access a particular logical unit; and

when a remote entity requests execution of an operation directed to a specified control device logical unit and involving one or more additional specified logical units, authorizing the request for execution of the operation only when an entry exists in the supplemental access table that represents authorization of the specified control device logical unit to access the additional specified logical unit.

However, Tulloch teaches tables with customized access (*Tulloch pg. 152*) and as pg. 174 (§ 1-2) there is a direct relationship between a control device logical unit and a logical unit. Thus the examiner believes that this at least renders obvious and most probably is anticipated that in order to resolve the control device logical entry into the appropriate logical unit there a table-like structure listing the relationship of these entities is used.

6. Re claim 4: Although Tulloch teaches the method for authorizing access by remote entities to logical units provided by a mass storage device he does not explicitly teach the method wherein the supplemental access table includes entries each comprising:

an indication of a control device logical unit; and  
an indication of a logical unit.

However, Tulloch teaches an access table that includes entries that each represents authorization of a particular remote entity to access a particular logical unit (*Tulloch* pg. 152) ; tables with customized access (*Tulloch* pg. 152) and as pg. 174 (§ 1-2) shows there is a direct relationship between a control device logical unit and a logical unit. Thus the examiner believes that this at least renders obvious and most probably is anticipated that in order to resolve the control device logical entry into the appropriate logical unit there a table-like structure listing the relationship of these entities is used.

7. Re claim 2: Although Tulloch does not explicitly teach the method wherein the mass storage device includes ports through which requests from remote entities are received, wherein authorizing a request for execution is carried out by a controller within the mass storage device, this feature is anticipated by Tulloch as pg. 303 (§5) shows that in order to communication between a client and a server being formed the client and the server must have ports open, and as pg. 152 shows that all access to logical units is controlled by a mass storage device control mechanism therefore any execution requests are authorized by the controller within the mass storage device.
8. Claims 6-7 and 9 are substantially equivalent to claims 1-2 and 4; therefore claims 6-7 and 9 are similarly rejected.
9. Claims 3, 5, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tulloch (*Mitch Tulloch, "Administering Internet Information Server 4"*, New York McGraw-Hill Professional, 1998, ISBN: 0072128232) as applied to claims 2 and 7 above, in view of

Microsoft Press (*Microsoft Press, "Microsoft Windows NT Server, Resource Guide", 1996, ISBN: 1-57231-344-7*).

10. Re claim 3 and 5 Although Tulloch does not explicitly teach the method wherein the mass storage device includes ports through which requests from remote entities are received, wherein the access table includes entries each comprising:

- an indication of a logical unit or control device logical unit;
- an indication of a port; and
- and indication of a remote entity.

However, Tulloch teaches tables with customized access for logical unit and remote entities (*Tulloch pg. 152*), shows that in order to communication between a client and a server being formed the client and the server must have ports open (*pg. 303 §5*).

Therefore it would have been obvious to one of ordinary skill in art at the time of applicant's invention to include ports within the table in order to provide even more secure environment to prevent logical unit attacks by remote entities.

11. *Tulloch* does not teach the method wherein the mass storage device is a disk array and remote entities are remote computers interconnected with the disk array via a communications medium. Microsoft Press teaches that a mass storage device is implemented using hard disks (*Microsoft Press, pg. 73 § 8*) and that disk array provides fault-tolerant disk configuration (*Microsoft Press, pg. 155 §7*). Therefore it would have been obvious to one of ordinary skill in art at the time of applicant's invention to use the disk array to minimize risk of data loss.

12. Claims 8 and 10 are substantially equivalent to claims 3 and 5; therefore claims 8 and 10 are similarly rejected.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1–4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sicola et al. (U.S. Patent No. 6,356,979) in view of *Schultz* (E.Eugene Schultz, “Windows NT/2000 Network Security”, 1<sup>st</sup> edition, ISBN: 1-57870-253-4, August 2000)
14. Sicola et al. teaches a method for authorizing access by remote entities (*hosts*) to logical units provided by a mass storage device (*storage system*) comprising:
- providing a supplemental access table that includes entries that each represents authorization of a particular control device logical unit to access a particular logical unit (*Sicola et al.*, col. 5 lines 4-13).
- wherein the mass storage device includes ports through which requests from remote entities are received, and wherein authorizing a request for execution is carried out by a controller within the mass storage device (*Sicola et al.*, col. 5 lines 33-61, Fig. 4B), and wherein the access table includes entries each comprising:

an indication of a logical unit or control device logical unit (*controller, Sicola et al., host connection list, Fig. 4b*);

an indication of a port (*port, Sicola et al., host connection list, Fig. 4b*); and

an indication of a remote entity (*host, Sicola et al., host connection list, Fig. 4b*).

15. Sicola et al. does not specifically teach providing a supplemental access table which includes entries each comprising:

an indication of a control device logical unit; and

an indication of a logical unit, and

when a remote entity requests execution of an operation directed to a specified control device logical unit and involving one or more additional specified logical units, authorizing the request for execution of the operation only when an entry currently exists in the access table that represents authorization of the remote entity to access the specified control device logical unit and, for each of the one or more additional specified logical units,

an entry exists in the supplemental access table that represents authorization of the specified control device logical unit to access the additional specified logical unit.

Schultz teaches that information security is the most important issue as confidentiality of data is a major concern for most organizations (*Schultz, pg. 14*). Schultz teaches protection at the logical unit level by assigning appropriate permissions to each logical unit (*Schultz, pg. 360-361, Authorization and NTFS-5*). Since *Sicola et al.* teaches only authorization to control device logical unit but “unregulated” access to logical unit it would have been obvious to one of ordinary skill in art at the time of applicant’s



invention to include and utilize additional (*supplemental access*) table (according to Schultz's teaching) into *Sicola et al.* invention. By authorizing control device logical unit working on behalf of remote entities the supplemental table would provide protection directly to data.

16. Claims 6-9 are substantially equivalent to claims 1-4; therefore claims 6-9 are similarly rejected.

17. Claim 5 and 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Sicola et al.* (U.S. Patent No. 6,356,979) as applied to claim 2 above.

18. *Sicola et al.* teach the method of wherein the mass storage device is a disk array and remote entities are remote computers interconnected with the disk array and remote entities are remote computers interconnected with the disk array via a communications medium (*Sicola et al.*, abstract, co. 5 lines 45-50, and col. 6 lines 26-29).

19. Claim 10 is substantially equivalent to claim 5; therefore claim 10 is similarly rejected.

### ***Conclusion***

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Poltorak whose telephone number is (703) 305-0719. The examiner can normally be reached Monday through Thursday from 9:00 a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse, can be reached on (703) 308-4789.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9000.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, DC 20231

**Or faxed to:**

(703) 746-7239 (for formal communications intended for entry)

**Or:**

(703) 746-7240 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA 22202, Fourth Floor (Receptionist).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)

Application/Control Number: 09/726,852  
Art Unit: 2134

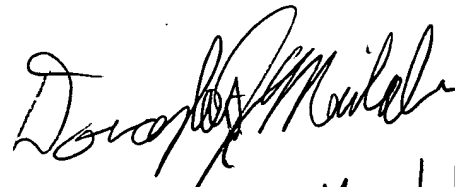
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Signature



Date

5/28/04

  
Douglas J. Meislahn